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ABSTRACT

Designed for students in grades 2 through 4, this self-teaching, interdisciplinary reading and activity program comprises a complete supplemental reading, science, and social studies approach to the problems of environmental pollution. Jelly Jam, a caring little animal, helps children understand how air, water, and land pollution affects their own lives and what they can do to help clean up the environment. Children read about ecological problems and, through experiments, field trips, plays, songs, coloring activities, crossword puzzles, mazes, and a host of school and family anti-pollution activities, learn real solutions that they themselves implement. The guide also presents self-corrective activities, a word list for vocabulary improvement, and answer pages for student self-teaching. (LH)

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Jelly Jam™

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THE PEOPLE PRESERVER™

by Judi Friedman

an environmental self-teaching activity book

2

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May 2, 1983

Part One

INTRODUCTION*

Hi!

I am Jelly Jam, the people **preserver**. I am a friend of people.

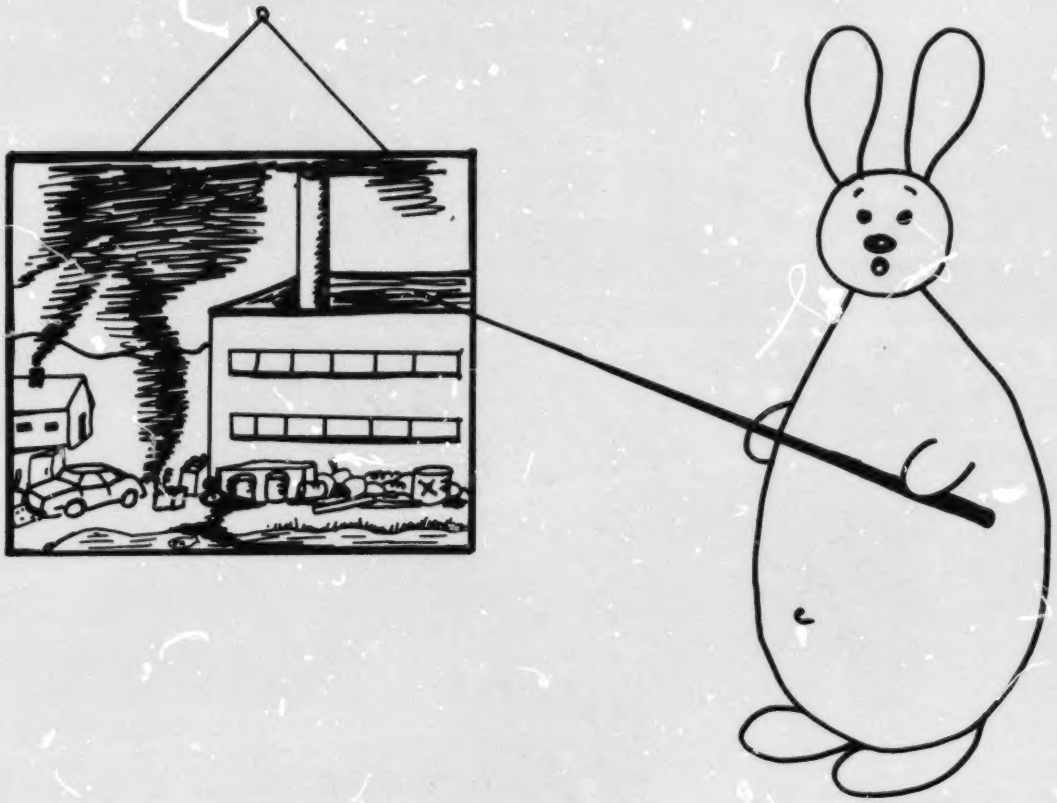
(*If you don't know the words in dark print, look on page 62.)

But I am sad . . .

because people are being careless.

Draw tears falling from my eyes.

People are putting dirty things into the air, the water, and the land. They are **polluting** our world.



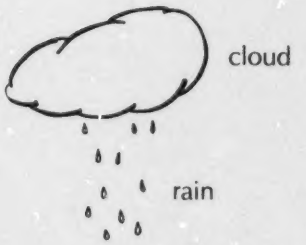
Are you one of those people?

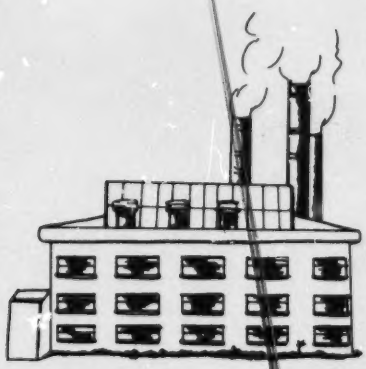
Yes____ No____

Are you sure? ____

Let's find out . . .

People who pollute are changing the **environment**. Some of the things that are part of the environment are shown below.





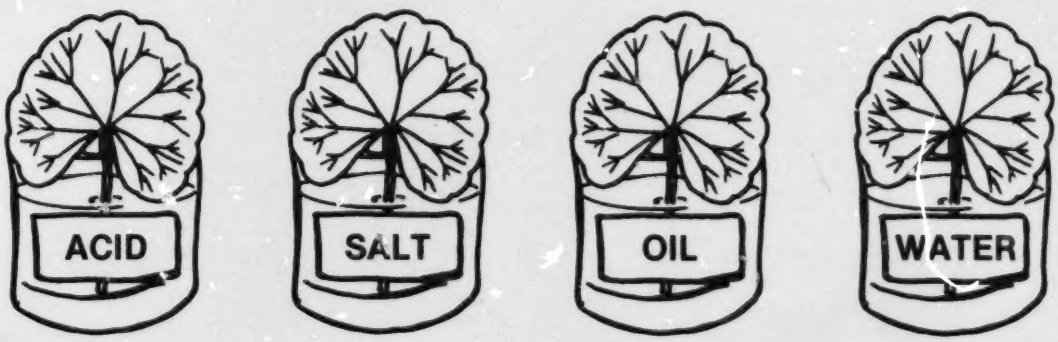
Draw a circle around anything that is made by people which may pollute or change our environment in a harmful way.

(All answers are on pages 65, 66, 67, and 68.)

Plants, animals, and people need clean air, clean water, and clean land. Find out what happens to a living thing when its environment is polluted or changed in a harmful way. Try doing this experiment at home or in school.

EXPERIMENT

1. Cut four **geranium** leaves from one plant.
2. Put each cutting into its own glass of water.
3. Now pollute the water in three of the glasses.
   a) Put two tablespoons of **vinegar** into one glass. Write **ACID** on a piece of tape. Put it on the glass.
   b) Put two tablespoons of salt into a second glass. Write SALT on that glass.
   c) Put two tablespoons of **oil** into the third glass. Write OIL on that glass.
4. Now write WATER on the fourth glass.
5. Put the four glasses near a sunny window. Watch the leaves for one week.



Circle the picture that shows the leaf that looks best. Color the leaves.

Part Two

AIR POLLUTION

There are different kinds of pollution. One kind is air pollution. Sometimes there are harmful things in the air. Then the air is polluted.

People and animals need to take in clean air with plenty of **oxygen** in it. Oxygen is given off by plants.

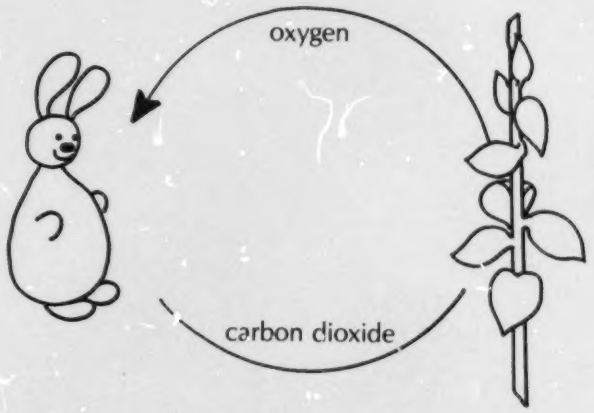
1. What would happen to all animals and people if there were not enough trees, bushes, or grass?

_____

_____

People and animals give out **carbon dioxide** into the air. Plants take it in.

The arrow in the drawing shows a plant giving off oxygen. I am taking it into my nose and mouth.



2. Make the bottom line into an arrow. It should show me giving out carbon dioxide, and the plant should be taking it in.

3. Color the plant. (I love plants.)

(Remember to look on page 62 if you don't know the meaning of a word in dark letters.)

Sometimes the air is polluted because there are too many small pieces of harmful things in the air. Do you have this kind of pollution near your home or school? Do the following experiment to find out.

EXPERIMENT

1. Put some butter on a piece of white **Kleenex**.
2. Leave it on your outside windowsill for two days.
3. Look at it through a **magnifying** glass.
4. Here is a place to put the Kleenex that has been outside. Put clear tape over it.

Do you see anything on the Kleenex?

Yes____ No____

Draw whatever it might have come from.

(Remember, answers are on page 65.)

Air pollution is also made of **gases** which we cannot see.

Some of the pollution in the air goes away by itself. The wind blows some of it away so there is not too much in one place. The rain and the snow also help to clean the air.

It has just rained. The air is cleaner. Draw a smile on my face.

But sometimes the pollution does not go away. Sometimes the rain water mixes with the gases in the air. The air pollution then becomes water pollution. It is called acid rain.

Acid rain falls into lakes. Too much acid rain makes the fish and plants die.

This is a map of the United States. The dark places are the ones that would be hurt by too much acid in the rain.

Put a red X on the map to show where you live.

When we take in too much air pollution, it hurts our **lungs**.

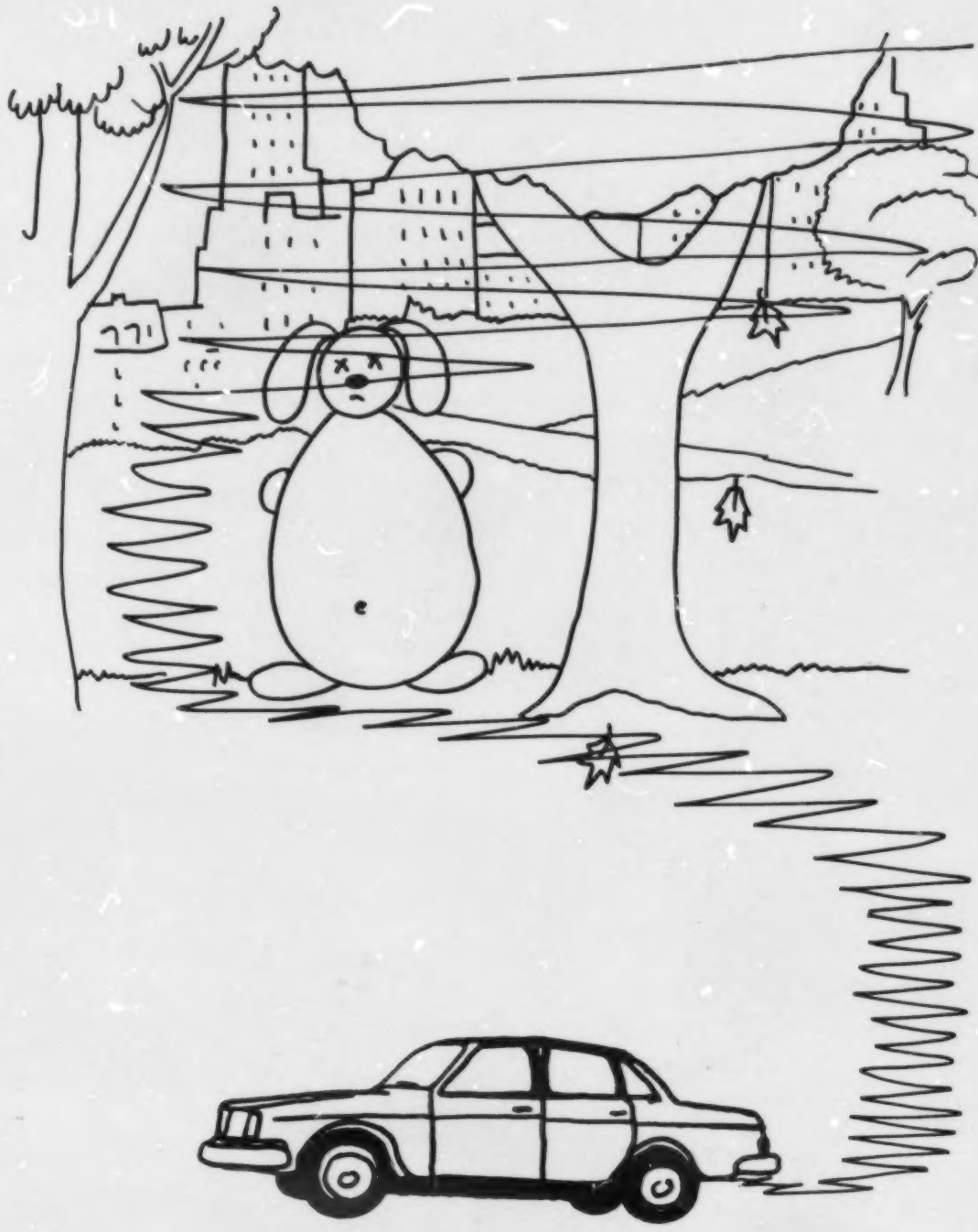
Air pollution helps to cause **lung cancer** and **emphysema**. Many, many people die from these sicknesses every year.

Air pollution also helps to cause colds, headaches, **dizziness, coughing, sore** throats, and sore eyes.

Air pollution can also make animals sick by harming the plants that they eat. It rots cloth and rusts iron, too.

Draw a worried look on my face. Make my eyebrows turn up. There is no smile on my face. My ears should be hanging down.

Put an X on each part of this woman that might be harmed by taking in polluted air often. Look at page nine for ideas.



Cars send many **poisons** into the air. Sometimes the air even looks brown. The brown air is called **smog.**

Color the air brown.

Every year there are more and more cars polluting the air.

More and more roads are being built.

There would be less pollution if people would use fewer cars and would use more vans, buses, and bicycles.

Here are some different ways that eight people can go to work.

Put 1 next to the way that makes the least pollution. Put 2 next to the way that makes the next least pollution. Put 3 next to the way that makes more pollution than 2. Write 4 next to the most polluting kind of travel.

(Don't forget! Answers are on page 65.)

Air pollution also comes from burning **fuels** like oil, coal, and wood. Burning can make the air dirty.

EXPERIMENT

1. Ask your parent or teacher to help you light a candle.
2. Hold a plate over the top of the flame.
3. Take the plate away. Look under it.
4. What do you see on the bottom of the plate?

_____

Draw it in the box below.

Many **power plants** make **electricity** by burning oil and coal. This burning makes smoke which has **sulfur dioxide** in it. Too much sulfur dioxide can make people sick.

EXPERIMENT

1. Ask your parent or teacher to light a kitchen match.
2. Blow it out.
3. Smell it.
4. The gas that you smell is sulfur dioxide.

Other kinds of power plants pollute in different ways. **Nuclear power** plants give off **radiation**. The air, the water, and the soil can become radioactive.

You cannot see, smell, taste, or feel radiation. However, too much radiation can cause sicknesses like cancer.

Too much radiation is very dangerous. I get very angry when I think about it.

Draw me looking angry.
(My eyebrows and mouth should turn down.)

Are there other dangerous things that you cannot see?

Yes____ No____

Draw where one of the dangerous things comes from.

(Don't forget! The new words are on page 63, and the answers are on page 65.)

Many bug **sprays** also pollute the air. When it rains, these sprays mix with the rain water. The poisons run into the land and the water.

These sprays can kill birds and other animals. They can make people sick, too.

Look at the pictures below. Find the little dots in each picture. The dots are the poisons in the sprays. Color the dots brown in each picture.

1. Rain water falls over sprayed soil.

2. The water runs into a river. Now there is spray in the river.

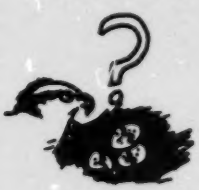
3. The spray gets into bugs in the river.

4. Fish eat the bugs. Now the spray is in the fish.

5. Some birds eat those fish. Now the spray is in the birds.

6. Birds lay eggs. Some of the spray is in the eggs. It makes the egg shells too thin.

7. Sometimes the thin egg shells break before the babies are ready to come out. Then the little birds die.



Some people pollute the air inside their own bodies by smoking. Their smoking also pollutes the air outside of their bodies.

People can get sick when there is too much smoke in the air.

Here I am asking someone not to smoke near me. I don't want polluted air in my body. I try to be very nice when I ask.

I am talking. Make my mouth look like an "O". Show my ears and eyebrows up.

Write in the word "Please" on the line in the above picture.

You cannot see most air pollution, but you can find out about it.

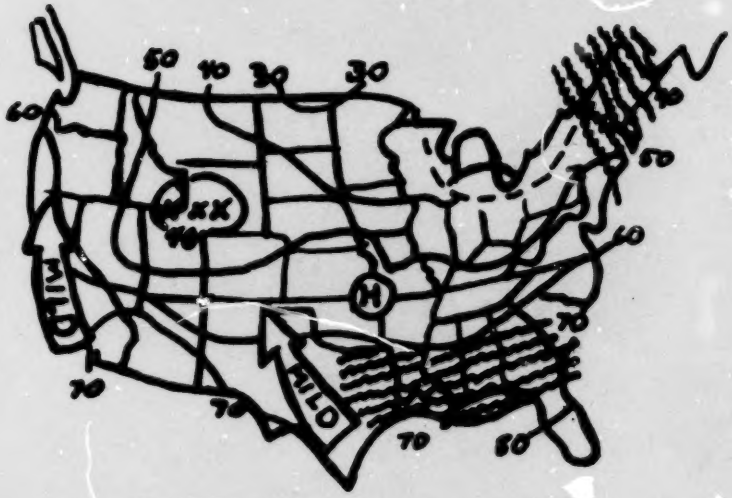
Ask a parent or teacher to help you call or write the people in your state who work on **environmental protection.** Ask how to find out about air pollution.

Listen to the news on the radio and the TV.

Look for the air pollution chart in your city newspaper. It is often near the weather map.

This is a weather map.

THE WEATHER



Pollution

Good
Moderate
Unhealthful
Very unhealthful
Hazardous

What is the air pollution today? Find the correct word in the box above. Color it red.

When the air pollution is very unhealthy or hazardous, I stay inside. I play a game or read a book. I don't run around.

Read the next few pages, and you will find out how you can help to clean up the air.

Color the sky blue. Color the living things beautiful. Use any colors!

Try to walk or ride a bike instead of going in a car. It is better for you, and cars pollute the air.

Color my cheeks pink.

I feel good when I **exercise** outdoors.

If I have to go in a car, I try to go with my family or some of my friends.

Try to use less electricity. Then the power plants will not have to make as much electricity. They will not make as much pollution, either.

Finish the sentences below by writing the correct letter in each space. Number 1 is done for you.

1. Turn off electric lights _c_
2. Turn off the TV ____
3. Keep outside doors closed in cold weather ____
4. Don't use any more hot water than you need ____

a. so that the heat in your house is not lost.

b. because it can take a lot of electricity to heat water.

c. that are not being used.

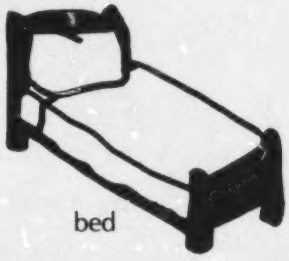
d. when no one is watching it.

(Check your answers on page 65.)

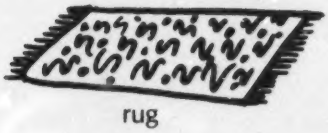
There are many things that can use electricity in the home.

Put a blue circle around each one.

iron

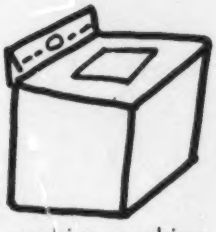

bed

TV


rug

toaster

picture


washing machine

lamp

electric stove

vacuum cleaner

candle

glass

cat

Now put a red X on the ones that should be turned off whenever they are not being used.

Here is another way to help stop pollution. Don't turn up the **thermostat**!

Put a red X on the thermostat.

When I am cold, I do not turn up the heat right away.

Instead, I put on my sweater.

I am wearing a dark sweater. Color it.

Find out why I am wearing a dark sweater by doing the following experiment.

EXPERIMENT

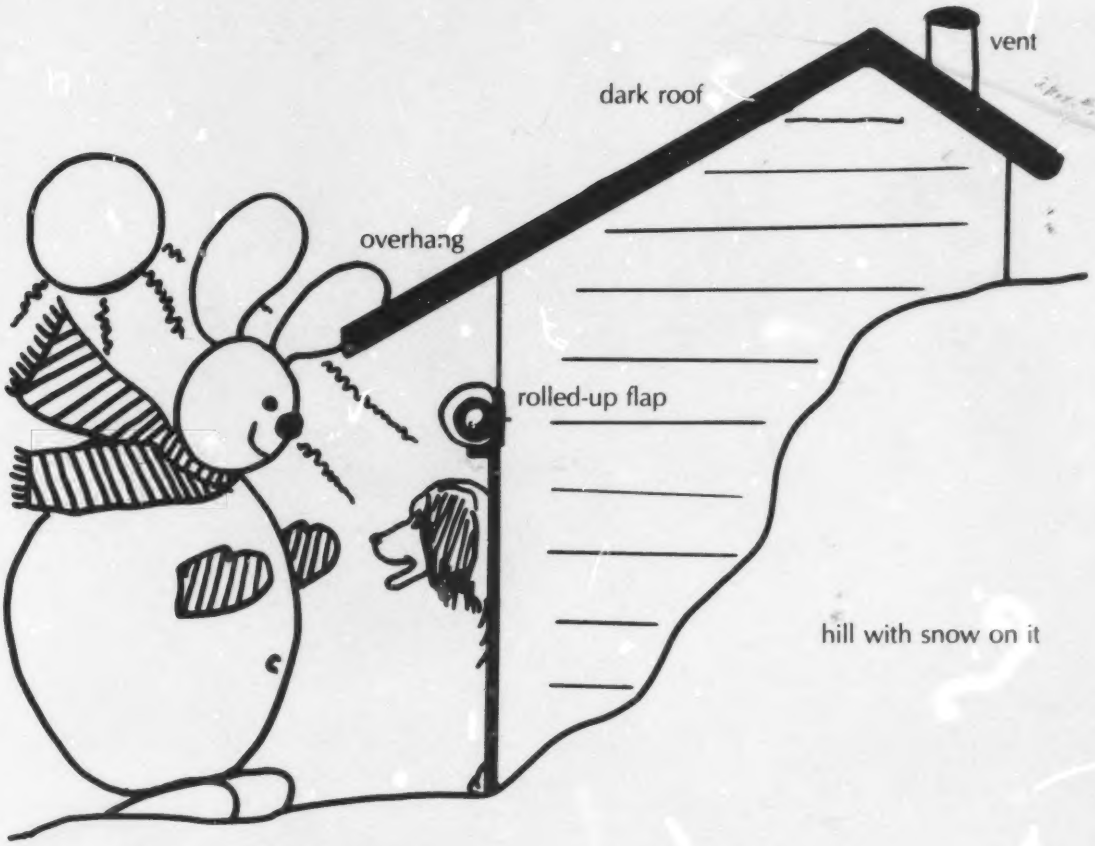
1. Wet a piece of black paper and a piece of white paper.
2. Put them on a plate near a sunny window.
3. Feel the papers after twenty minutes.

Which paper is warmer? Black?____ White?____

(Look on page 66 to find out why one color is warmer than the other!)

I love the sun. Sunlight can warm houses. Then we do not need to use as much oil, coal, gas, or nuclear energy to heat our homes.

I have made a warm, **solar** dog house for my pet.



My doghouse is turned toward the south. It is built into a hill. The earth keeps the house warmer in the winter and cooler in the summer.

There is an overhang on the roof. Because the sun is low in the winter, it shines into the house. In the summer the sun is high. The overhang blocks the sun.

It is winter, but my pet is warm. Draw her **tongue** hanging out. Color the picture.

You can also help to stop pollution from sprays.

Here are some ways to stop problems without using any bug sprays.

Draw a line from the problem on the left side of the page to the answer on the right side of the page.

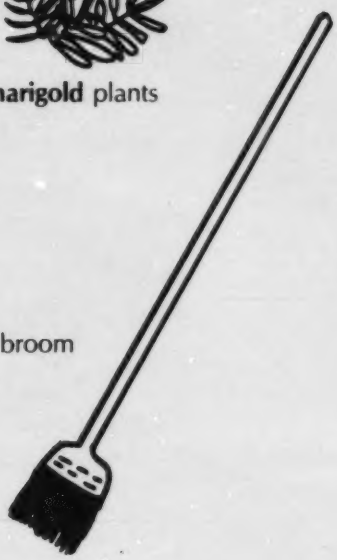
fly

ants in honey that fell on the floor

spider webs in the house

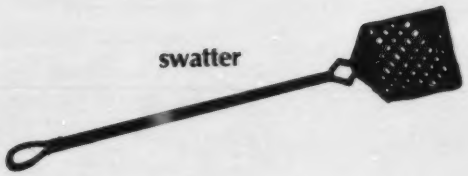
bugs that eat vegetables in the garden

marigold plants



broom

wet rag



swatter

Instead of using sprays, make your yard and garden a nice place for birds. They eat hundreds of insects every day!

Give homes, food, and water to the birds. They like a yard or an empty lot that has trees, bushes, and places where the grass grows tall.

Draw birds near me.

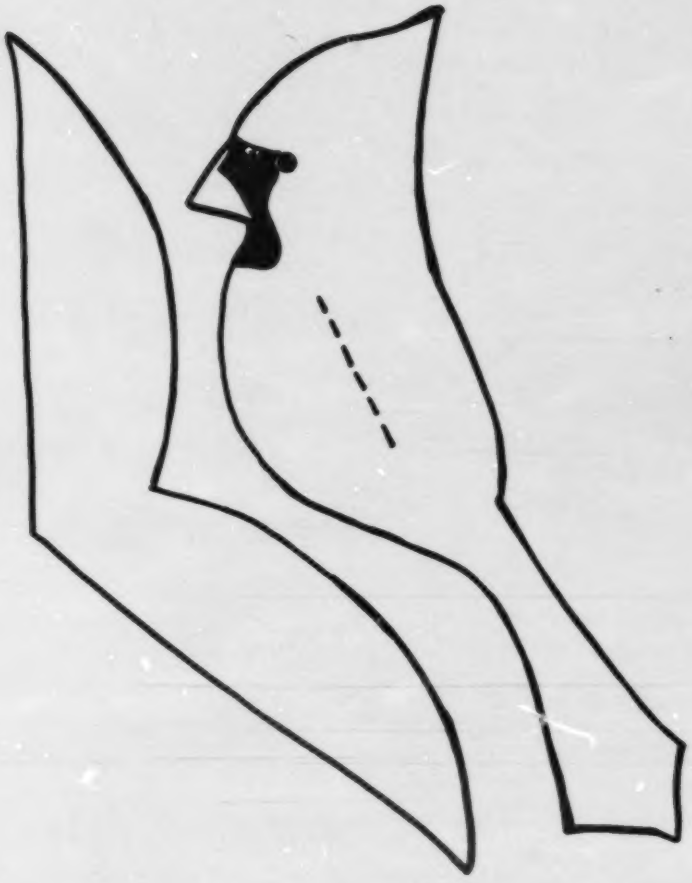
Birds are not afraid, because I am gentle.

This bird eats lots of bugs.

Trace the bird on a piece of paper.

Color the bird red. Then cut it out. Be sure to cut along the dotted line, too.

Now put the wings through the cut in the body. Fold the wings up.



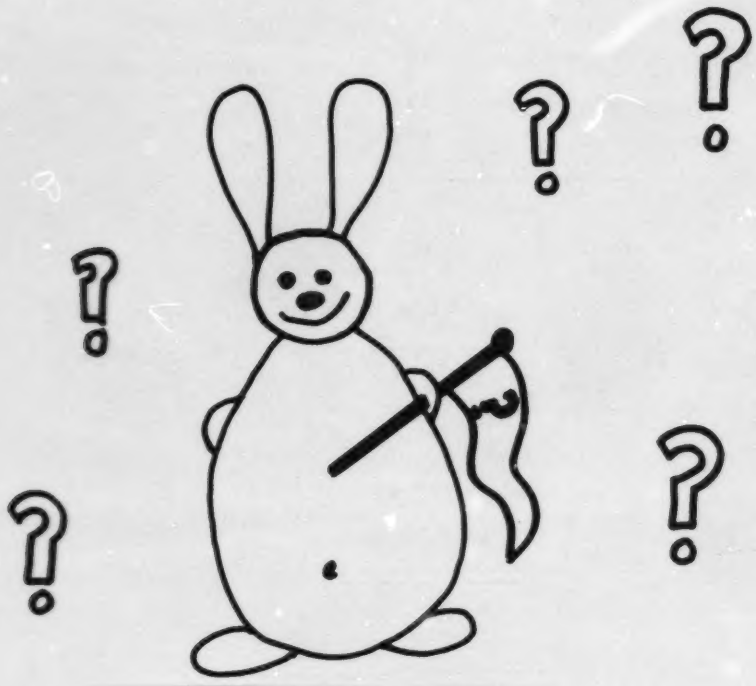
If you want a hard bird, paste it on cardboard. Then cut it out.

What kind of a bird is it? Circle the right answer.

robin crow woodpecker **cardinal**

(Is your answer right? Look on page 66.)

Can you think of something that you and your parents can do at home to help clean up the air?

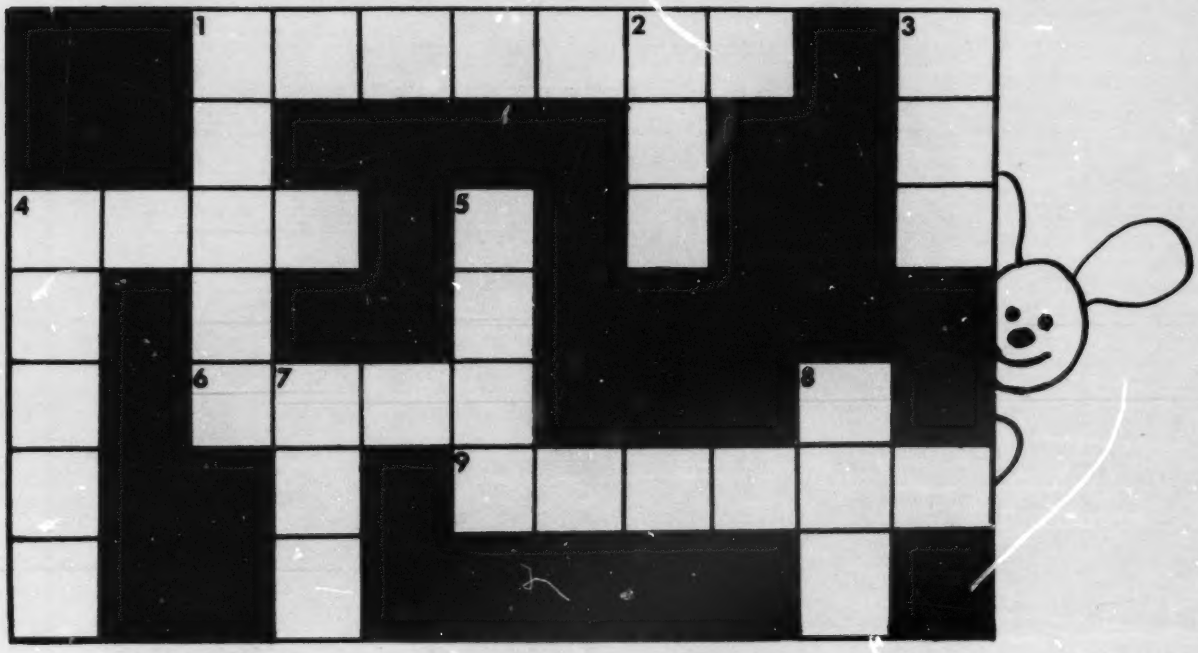


Draw a picture of what you can do.

AIR POLLUTION PUZZLE

Do the puzzle using some of the words below. Use the ideas on page 29 to help you.

now	clean	off
sore	pollution	birds
subway	spray	eyes
burning	cars	afraid
lung	you	people
fish	mad	bikes



ACROSS

1. Dirty air comes out of a **chimney** when oil or coal is _____.

4. We would have cleaner air if people did not drive so many _____.

6. Polluted air can make your throat feel _____.

9. An underground train is called a _____. It helps the pollution problem because it carries so many people who might otherwise use cars.

DOWN

1. Millions of bugs are eaten every day by _____.

2. We must work for clean air _____ before it is too late.

3. _____ can help to clean up the air.

4. You should talk to everyone about _____ air.

5. Air pollution can make your _____ sting.

7. When you are not using lights, turn them _____.

8. When they think about living in a dirty, crowded world, many people feel _____.

Part Three

WATER POLLUTION

For millions of years the water in our rivers and lakes has been clean. Now the water is often not clean. In many places it is not safe to drink.

It is not safe to swim in many rivers or lakes, either. In some places even the **ocean beaches** are closed.

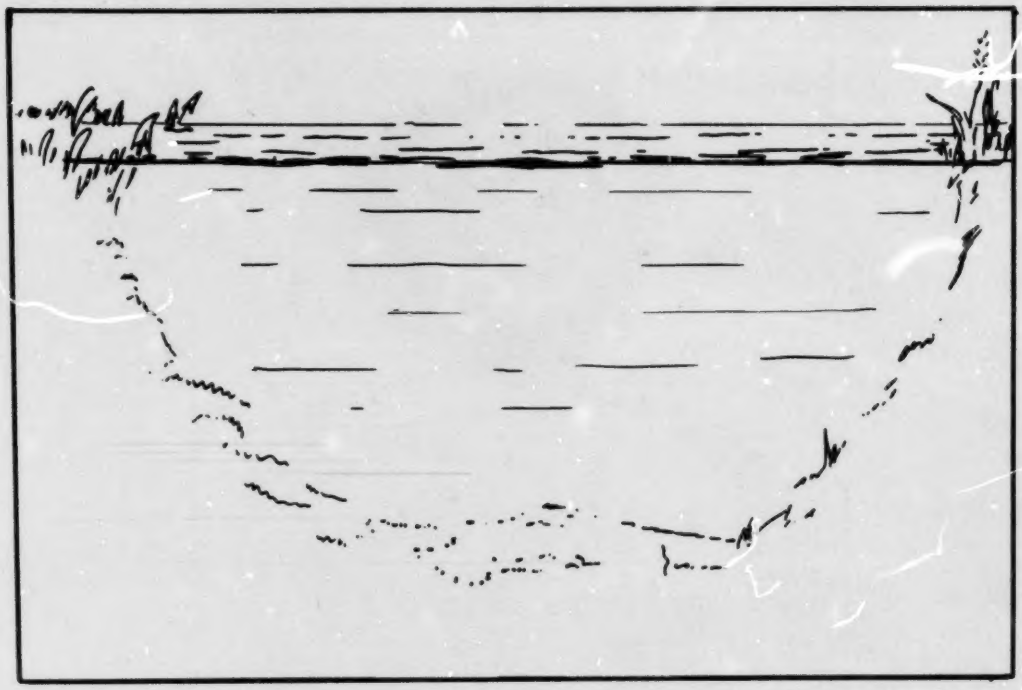
Swimming in polluted water can make people sick. You cannot tell if the water is clean just by looking at it.

Are the rivers or lakes near your house clean? ____

Should you drink the water in them? ____

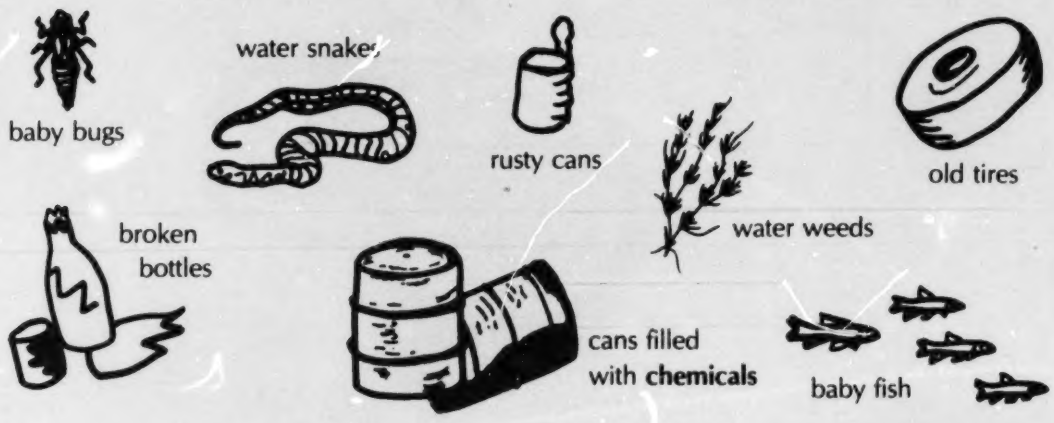
Staple ten sheets of paper together to make a book about water pollution. Draw a cover. Find some pictures of clean rivers and lakes and polluted ones. Cut them out and put them in your scrapbook.

This is a picture of a clean river.



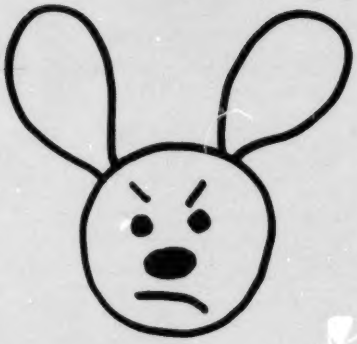
Some of the things below should be in a clean river.

1. Draw those things onto the picture above.

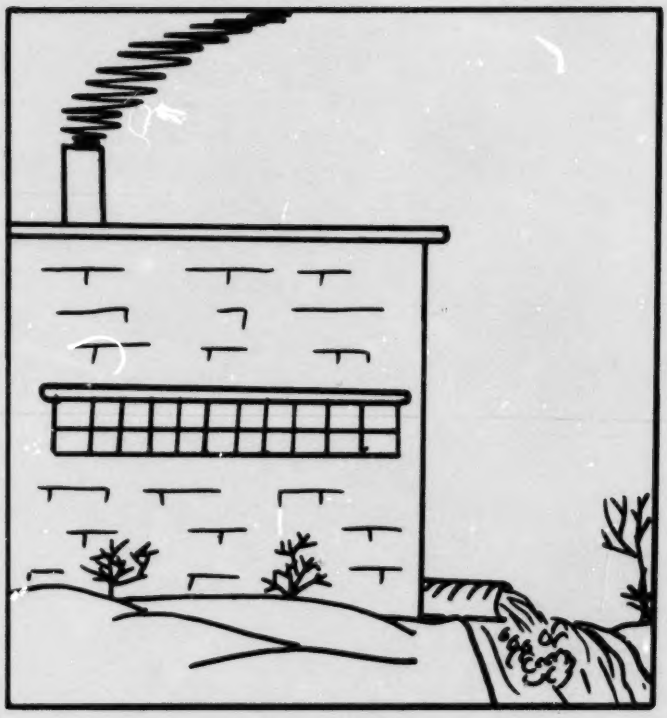


2. Put a red X through the things that should not be in a clean river.

(Did you get the right answers? Look on page 66.)



Some **factories** put their wastes into rivers or lakes and pollute the water.



The waste that comes from this factory is yellow-brown.

Color the waste. Show it going down the river.

Would you like to drink the water in this river?

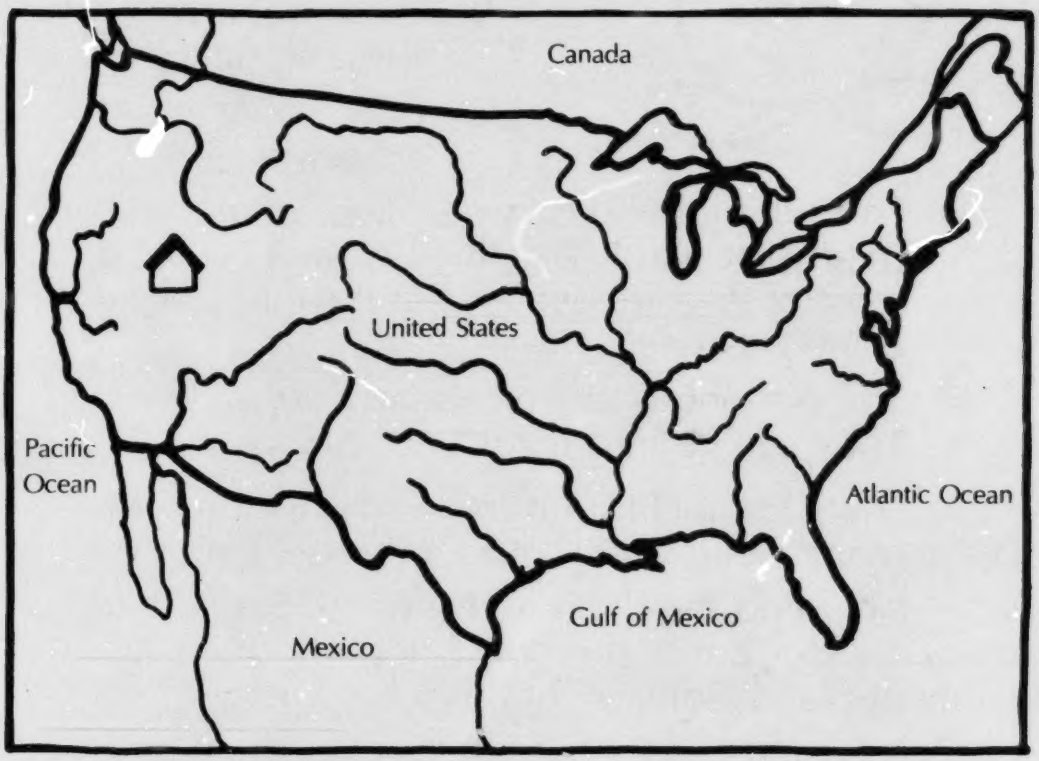
_____

Would you like to swim in it? _____

Some **streams** and rivers cannot be seen because they are under the ground.

Streams, rivers, and lakes often run into other rivers that go into the ocean.

Here is a map. Using a blue crayon, begin near the house and draw a stream. Show the stream going into a river, and the river going into the ocean.



Polluted water from one place may run into a different place. It may harm the people who use it.

Color the house brown. It is mine.

Some soaps and most cleaners have chemicals in them. These chemicals can be poisonous. They mix with water in the sinks, washing machines, and toilets.

Look at the picture on the next page.

A) The chemicals go down the drain with the dirty water.

B) Then the dirty water goes through a pipe.

C) That pipe goes into a big **sewer** pipe.

D) From there the dirty water goes into a **sewage treatment plant**. Usually the plant cleans up most of the dirty water, but it cannot make the chemicals safe.

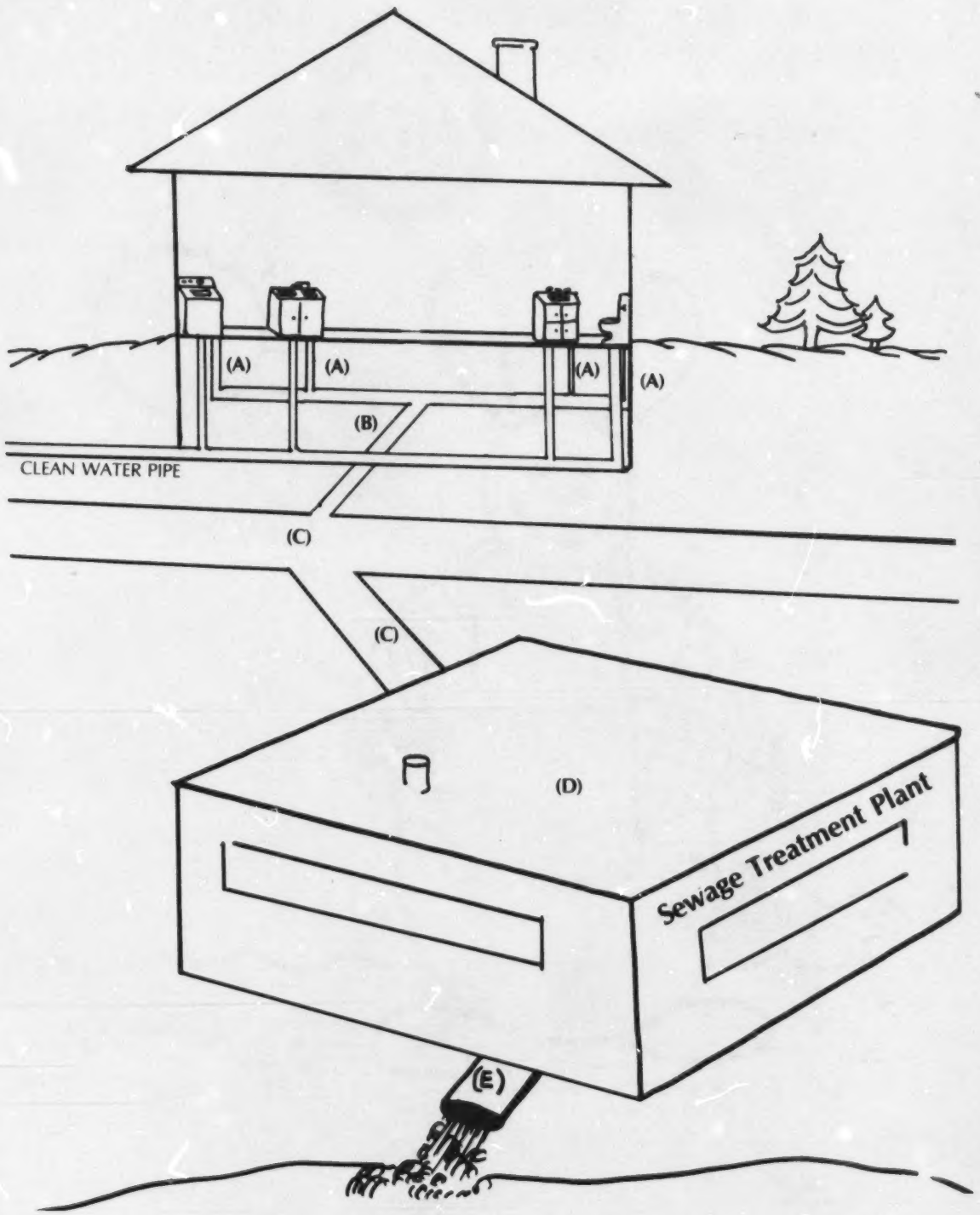
E) The poisonous chemicals flow out of the plant. They can go into rivers and streams.

1. Using the picture on the next page, find the pipe carrying clean water into the house. Color it blue.

2. Now find the drain and sewer pipes carrying the used water out of the house and into the sewage treatment plant. Color all of them brown.

3. Now put yellow over the brown drain and sewer pipes. (The yellow colors are the chemicals in the water.)

4. Find the pipe that comes out of the sewage treatment plant. Color that water blue with a little brown and lots of yellow in it. Chemicals are still in the water.


(A)
(A)
(A)
(A)
(B)
CLEAN WATER PIPE
(C)
(C)
(D)
Sewage Treatment Plant
(E)
River

I am so happy when people do not put any poisons down the drain.

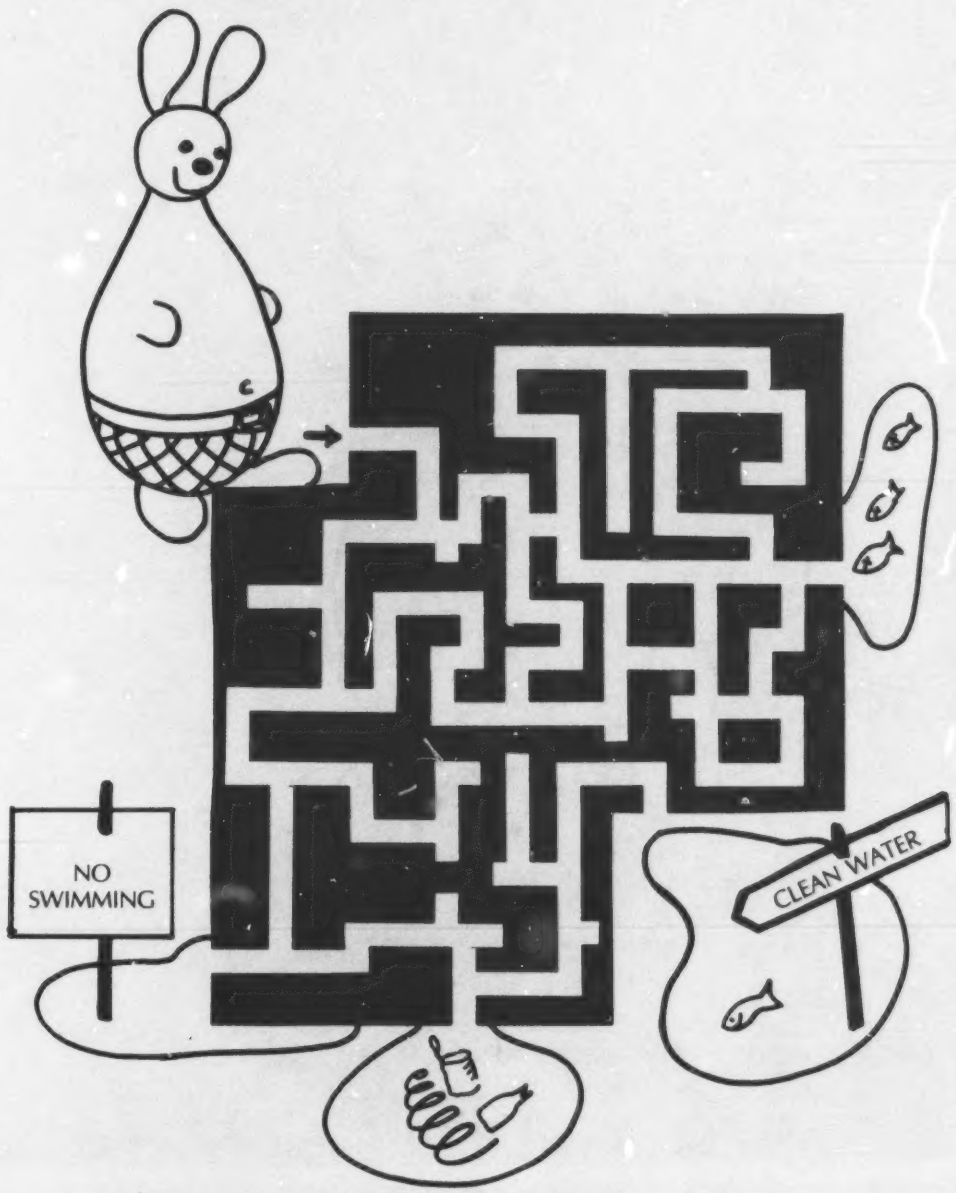
I love safe, clean water.

I have just been swimming in a clean lake. It is a hot day so I am drinking a glass of clean water.

Color this happy picture.

YOU can help to clean up the water. When it is clean, you will be able to swim in the rivers, lakes, or ocean waters near your home, and you will be able to eat fish from them.

Help me find my way to clean water.



Turn the page to find out how you can help to clean up the water.

One way to keep water clean is to keep it in the ground by not using so much of it.

Try not to let the water in your home run any more than you have to.

Take short **showers**.

I am singing my short-shower song.

Draw some notes (♪ ♪ ♪) near my mouth.

YOU CAN SAVE A LOT OF WATER EVERY DAY AND STILL BE JUST AS CLEAN!

EXPERIMENT: SAVING WATER

Remember: 2 cups = 1 pint
2 pints = 1 quart
4 quarts = 1 gallon

Make a water chart.

FIRST DAY

On the first day, close the drain in your sink. Let the water run as you usually do. Measure and write down all the water that you used for:

1. Brushing your teeth _____
2. Washing your hands and face + _____ (Add)

Total Amount of Water
Used on the First Day: _____

SECOND DAY

On the second day, try to save water. Use less water for 1 and 2, but stay just as clean.

1. Brushing your teeth _____
2. Washing your hands and face + _____ (Add)

Total Amount of Water
Used on the Second Day: _____

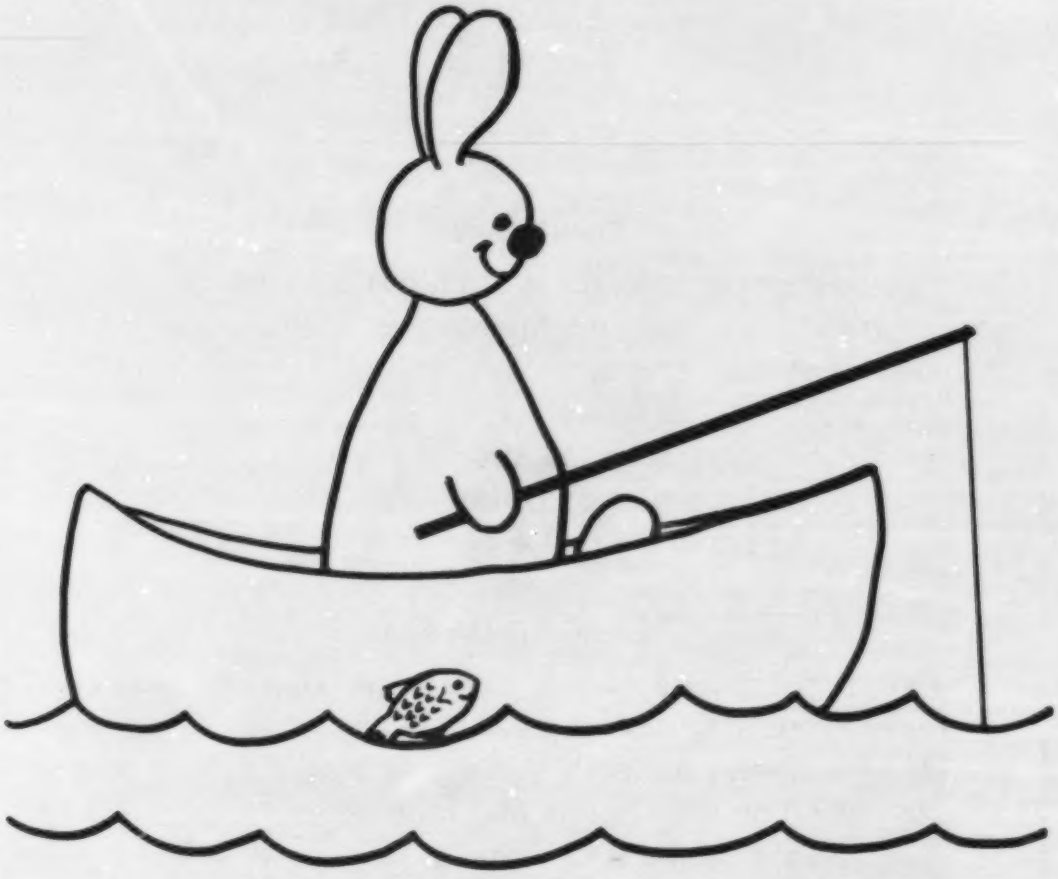
RESULTS

Water Used First Day _____
Water Used Second Day – _____ (Subtract)

Total Amount of
Water Saved _____

DON'T STOP DRINKING LOTS OF WATER.
CLEAN WATER IS VERY GOOD FOR YOU!

If you go out in a boat, don't put the wrong things into the water.



Cross out the things that do not belong in the water.

plastic cups	water plants
fish	cardboard boxes
cans	napkins
paper	bottles
broken pole	plastic coolers

(Answers are on page 67.)

Make up a play with some of your friends. Pretend that some children are fish, frogs, and turtles. Other children can be people who pollute the water by putting in cans. Others let chemicals, salt from the roads, or other poisons get into a small lake or a stream.

Pretend that some children come to clean up the water. They work hard taking away litter. The children write letters to the people who are putting harmful things into the water. Act out what happens to the animals when their environment is cleaned up.

What could people learn by seeing your play?

_____

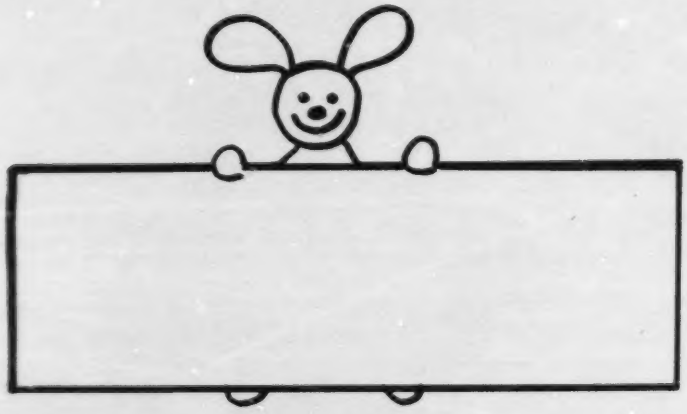
_____

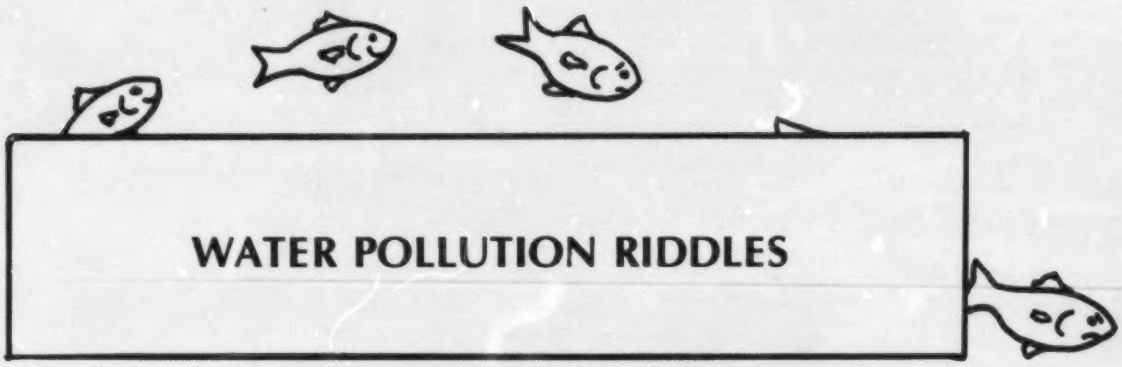
_____

_____

_____

Write the name of your play in the box.





WATER POLLUTION RIDDLES

Which words are the best answers to the riddles below? Write the words on the lines.

turtle	polluted river	salt
oxygen	clean water	fish
opened can	food	broken bottle

1. I am in a river. I am rusty. I cut a little girl's foot while she was swimming.

   What am I? _____

2. I am very sick. I do not have enough oxygen to breathe. I do not like to swim in this lake anymore.

   What am I? _____

3. I am wet. I smell bad. My color is not pretty. A factory puts waste into me every day.

   What am I? _____

4. I am wet. All living things need me. All plants, animals, and people will die without me.

   What am I? _____

Part Four

LAND POLLUTION

H E L P ! !

We're making large piles of **refuse**. Refuse is made up of boxes, bags, papers, plastics, cans, clothing, furniture, and bottles. It is also made up of old food called garbage.

Draw a sad mouth on my face.

Many families throw away about ten pounds of refuse EACH DAY!

Every year there are MORE and MORE people throwing away MORE and MORE things.

Put an X next to anything that you threw away in the wastebasket yesterday.

paper napkins____	**magazine**____	sock with a hole in it____
milk carton____	paper____	
gum wrapper____	comic book____	newspaper____
bottle____	old toy____	can____
broken toy____	book____	something else____

Now look at your Xs. Put a red circle around anything that you could have used again, fixed, given away, or sold.

Does your family throw away a lot of refuse each day?

Yes ____ No ____

WOW!

EXPERIMENT

Weigh all the refuse that your family throws away in one day.

Write the total weight on the line below.

How many families live on your street?

Write that number on the line below.

How many pounds of refuse are thrown away each day on your street?

Multiply the number of pounds of refuse by the number of families. Write the answer on the line below.

_____pounds X _____families = _____pounds

Some refuse stays around for a long, long time.

1. Try to guess how long it takes for one **aluminum** can to fall apart. Circle the right answer.
   one year ten years one hundred years
2. Which thing stays on the ground longer if it is not picked up? Circle the right answer.
   paper cup plastic cup

Some people put dangerous refuse into the ground. Cans of chemicals and poisons are dropped into holes. Then they are covered with dirt.

Rain falls. After many years, the cans open. The poisons and chemicals run out and get into underground water.

If you want to see how this happens, do the following experiment. Pretend that **flour** is dirt, red paper is poison, and water is rain.

EXPERIMENT

1. Put ½ cup of white flour into a clear glass.
2. Cut up some red paper into five small parts. Wet them.
3. Put the red paper on top of the flour.
4. Pour about ¼ cup of water slowly over the paper.
5. Wait for three days. Then make a hole with a pencil through the paper into the flour. Make the hole go to the bottom of the glass.
6. The water on top of the paper will run down into the hole. Add more water if needed.

What color is the water in the bottom of the glass?

_____

The red colors from the paper are like poisons in the ground. They mix with water and go wherever they can.

TELL YOUR PARENTS OR TEACHERS IF YOU SEE PEOPLE PUTTING DANGEROUS THINGS IN THE GROUND OR IN THE WATER.

YOU can help to stop pollution of the land. Here are some ideas.

If you buy a toy, try to find one that is well-made. Then it will not break so soon. It will last longer and won't become refuse in a few weeks.

Color me sad.

Some toy **materials** last longer than others. **Metal** is the strongest material and will last the longest.

Number the following things in order of how long they will last. Number 1 has been done for you.

____ paper

__1__ metal

____ light plastic

____ hard wood

____ cardboard

Of course, toys will last longer if they are taken care of.

(Don't forget! Your answers are on page 67!)

We must learn to use things over and over again. Then there will not be as much refuse.

One way to do this is by recycling. When something is recycled, it is changed into a new thing. Then it can be used again and not be thrown away.

You can help to make less refuse by collecting things so they can be recycled.

Try to collect bottles, cans, aluminum foil, and old newspapers. Ask your parents or teacher to help you get these things to a place where they will be picked up to be recycled.

Here I am taking bottles to the store so they can be recycled.

I also try to buy recycled paper whenever I can.

Show me smiling as I work.

To help you understand what happens to a bottle when it is recycled, do the following experiment with the help of your parent or teacher.

EXPERIMENT

1. **Melt** a chocolate bar slowly in a pan on the stove.
2. Stir the chocolate so it does not burn.
3. When there are no lumps, put the chocolate into a small dish.
4. Let the chocolate get cold.

The chocolate is the same now as it was before. Only its shape has changed.

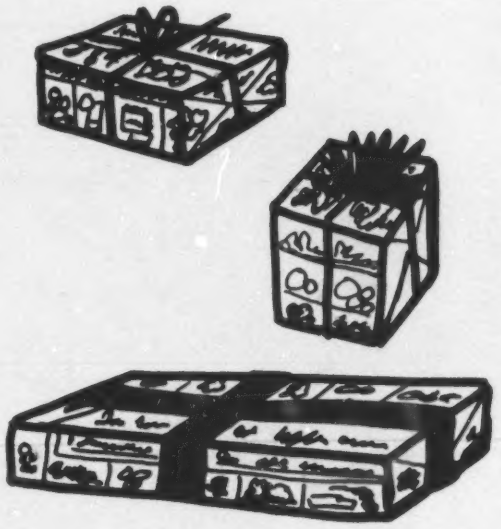
What made the chocolate change its shape? Mark the right answer. heat____ cold____

When a used glass bottle is recycled, it is melted into **liquid** glass. The liquid glass is poured into a mold. Then the glass cools. The mold is taken away. Now there is a new bottle made from an old bottle.

You can also help to make less refuse by reusing things.

Comics from the newspaper can be put around presents. The comics do not cost any more money, and the paper is used twice.

Color the presents in the picture.



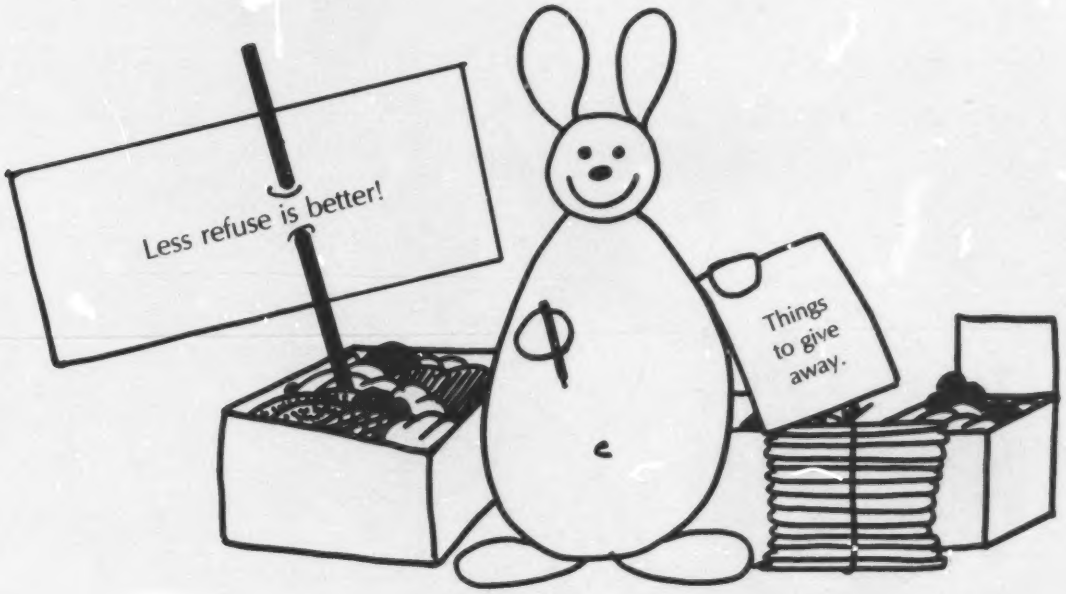
Clean glass jars can be reused to store food or other things.

When you are at the store, try not to take any bags that you do not need.

Reuse bags that are given to you.

I take my own shopping bag. Color it.

I give away things that I no longer need. I give them to people who do need them. Then I make less refuse.



I save my old magazines and give them to people who enjoy them.

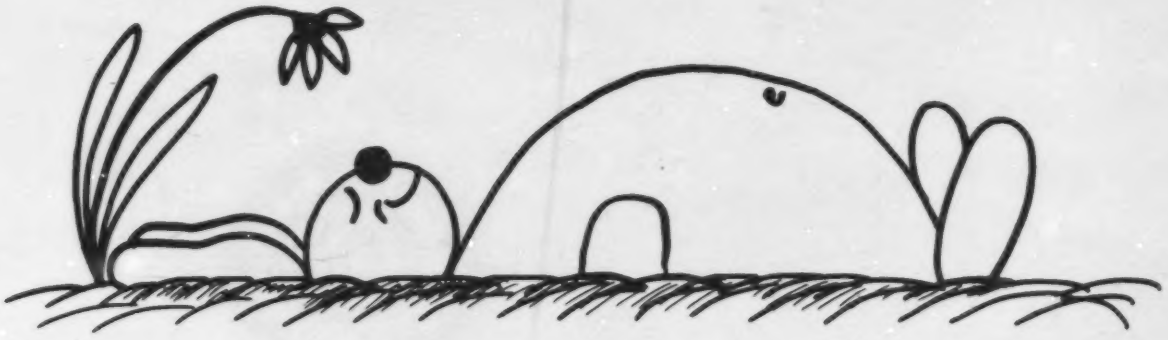
Circle the names of some places that might want old magazines.

schools	friends' homes
churches	homes for old people
hospitals	stores
doctors' and dentists' offices	

Even vegetable garbage can be used again. Mix vegetable garbage with cut grass, leaves, and soil.

Add **manure** if you can get it. Now you have made a **compost** pile.

Compost helps to loosen the soil in your garden so it is easier for the plants to push through the ground. Compost helps the soil to hold water. Plants also grow better because compost has plant food in it.



I put compost around this flower. It is saying, "Jelly Jam, I love you!" Draw some hearts around me. Color them red.

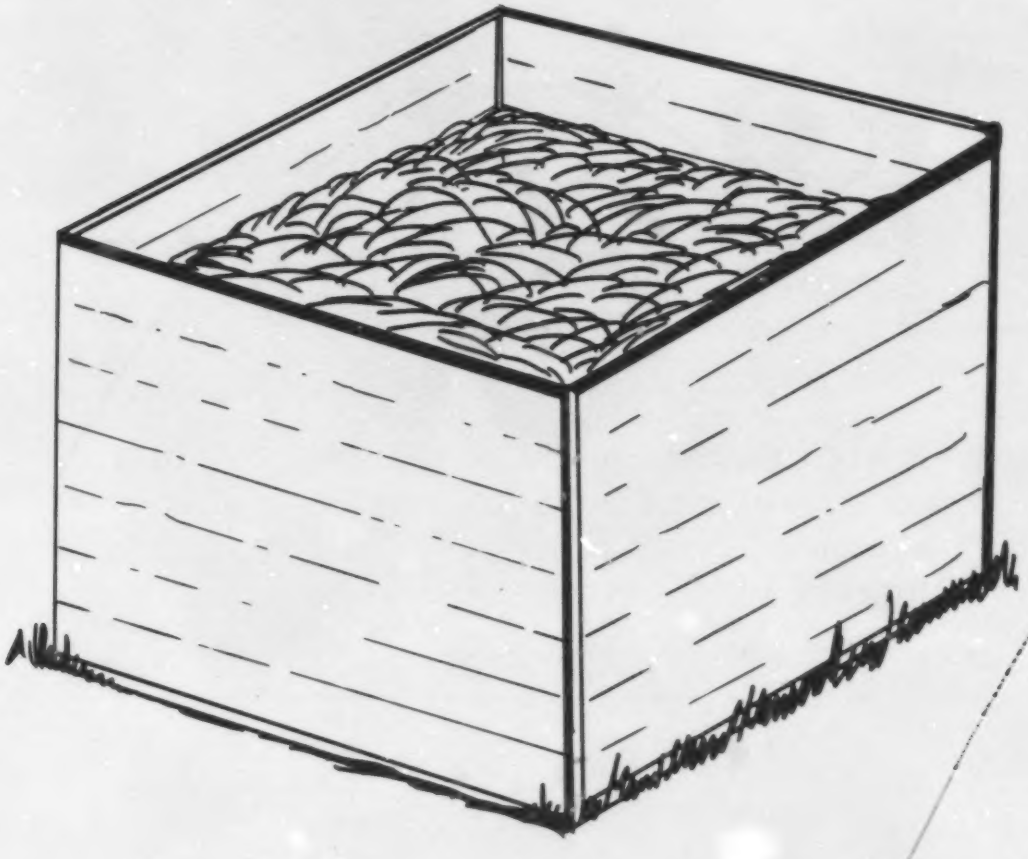
On the next page is a picture of a compost pile.

1. The bottom part is made of leaves, grass cuttings, and vegetable garbage.
2. The second part is made of soil and a little manure.
3. The third part is just like the bottom part.
4. The fourth part is just like the second part.

MIX UP YOUR COMPOST PILE EVERY FEW WEEKS.

(Remember — new words are on page 64.)

The top of the compost pile should go down in the middle. Then rain water will run into the pile. Wet the compost if it gets too dry.



What color should a well-mixed compost pile be? Circle the right answer.

brown yellow red green

Color the compost.

Part Five

MORE IDEAS

Talk about how to clean up our earth with ANYONE who seems interested.

Ask your parents, teachers, and librarians to help you find books about pollution and the environment.

Write the names of those books here.

_____

_____

_____

Pretend that you are going to write a book about stopping pollution. Choose the most important things that you would write about. Circle them.

salt or oil in water	bug sprays	litter
garbage in the ocean	smog from cars	smoking
factory wastes in water	piles of refuse	radiation
sulfur dioxide in smoke	chemicals in water	acid rain
bottles and cans in rivers	poisons in the soil	something else

We need to have our laws against pollution **enforced**. Some people do not follow some of the laws.

We also need more laws to help clean up our air, water, and land.

You can write to the people who make the laws of your town, your state, and your country.

Tell them about any new laws that you would like them to make or any laws that are not being followed.

The head of your town or city is often called the mayor.

Write his or her name here. (Ask your teacher or parent for help if you need it.)

_____

The address is: _____

_____

The head of your state is called the governor.
The governor's name is: _____
The address is: _____

_____

Write the name of your United States **representative** here: _____
The address is: House Office Building
Washington, D.C. 20515

Write the names of your United States **senators** here: 1) _____
2) _____
The address is: Senate Office Building
Washington, D.C. 20510

POLLUTION = MONEY

Cleaning up pollution costs money. We pay for some of this cleaning when we pay **taxes**.

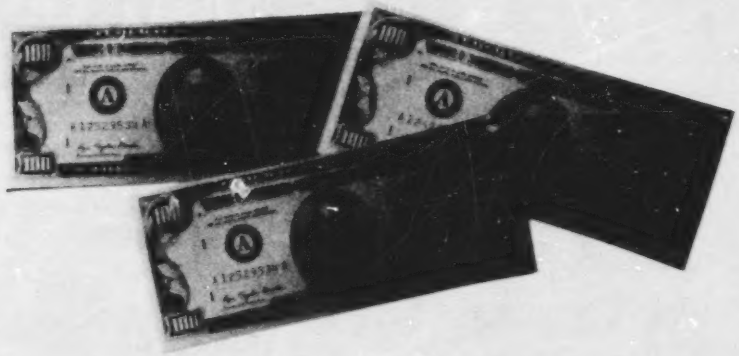
We pay in other ways, too.

1. Polluted air makes clothing, buildings, and homes get dirty faster. We must pay lots of money to clean, paint, and fix them.
2. Polluted air rusts iron and breaks down cement. Then we must pay to fix bridges and roads.
3. Polluted air can make people sick. Then we must pay for hospital care, doctor's care, and for **medicine**.

Color the money green.

4. People cannot drink polluted water. It costs money to clean the water.
5. Crops do not grow well on soil that has been poisoned by sprays or radiation. Food is harder to get, so it costs more.
6. Cleaning up littered land costs money. In New York it costs forty cents to have one man pick up one bottle that is thrown away along the side of the road.

And if we DON'T pay money now to clean up our earth, we will pay even MORE money later.



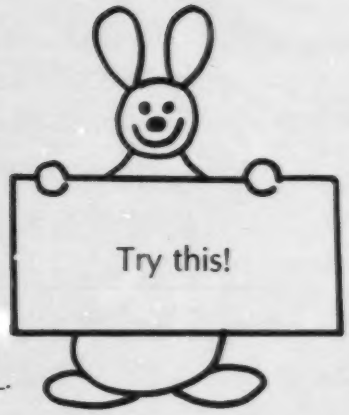
Color more money green.

For more information, ask your parent or teacher to help you call or write:

1. your state department of health
2. your state department of the environment
3. The United States Environmental Protection Agency, Washington, D.C. 20460

POLLUTION IS COSTING US TOO MUCH MONEY. WE MUST CLEAN UP OUR EARTH!

ACROSS

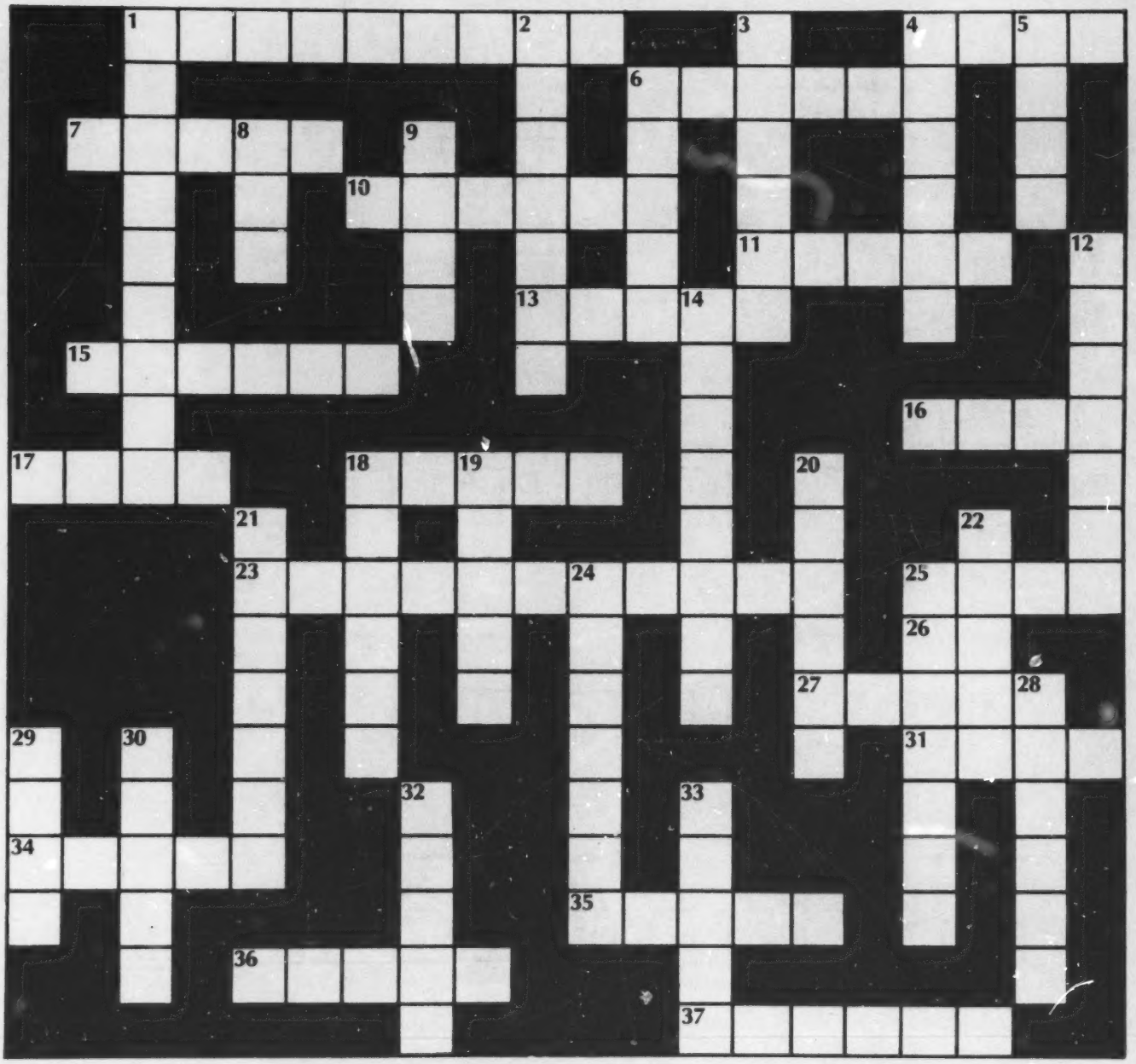


1. Jelly Jam is the People _____.
4. We can _____ fight pollution.
6. Most pollution is caused by _____, not by plants and animals.
7. Everyone must try to keep the air, land, and water _____.
10. Bees help plants by spreading _____.
11. The opposite of clean is _____.
13. Air pollution may contain some dangerous _____.
15. Many _____ are polluted by factories.
16. It would not be safe to _____ in polluted water.
17. We spend money to clean up littered _____.
18. If we stop wasting electricity, there will be less pollution from _____ plants.
23. We can save money if we stop wasting _____.
25. If we carry our own shopping _____, we will not waste so much paper.
26. Jelly Jam asks each of _____ to help stop pollution.
27. We must clean up our _____.
31. All living things _____ water and air.
34. Many factories pollute the air with dirty _____.
35. We must try to get rid of insect pests without using a bug _____.
36. Our ears and nervous systems can be damaged by _____ pollution.
37. A small river may be called a _____.

DOWN

1. _____ is harmful to living things.
2. _____ is the study of plants and animals living together in their environment.
3. Each person breathes 35 _____ of air each day.
4. Clean air and water are important to our _____.
5. We could not _____ without plants.
6. Many forms of life need clean water in _____.
8. Smoke pollutes the _____.
9. Compost helps make rich _____.
12. We must preserve safe places for _____ to live.
14. People need outdoor _____ in clean air.
18. Jelly Jam always says "_____" when he asks us to help clean up our world.
19. All living things must have _____.
20. People get _____ from the air, but fish get it from the water.
21. If we _____ bottles, cans, and papers, we can prevent lots of waste.
22. People who really care about our world try not to _____ anything.
24. We should not use dangerous sprays to kill _____.
25. A _____ forest pollutes the air, and many animals are killed.
28. Electric power plants have killed millions of fish by putting _____ water into rivers.
29. _____ cannot live in water that is too warm.
30. Toads and _____ are important insect eaters.
32. Packaging and wrapping materials make mountains of _____ every year.
33. If your yard is a nice place for _____, they will help you by getting rid of many harmful insects.

air	**ecology**	insects	pollution	soil
animals	electricity	land	ponds	spray
bags	exercise	live	pounds	stream
birds	fish	need	power	swim
burning	frogs	noise	preserver	trash
cities	gases	oxygen	recycle	us
clean	health	people	rivers	waste
dirty	heated	please	smoke	water
earth	help	**pollen**		



(New words are on page 64.)

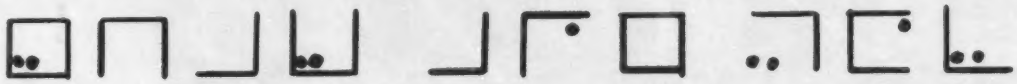
A SECRET CODE FOR JELLY JAM'S FRIENDS

The first two letters are written for you. Can you write the rest of the letters by using the code?

A	B	C
D	E	F
G	H	I

J	K	L
M	N	O
P	Q	R

S	T	U
V	W	X
Y	Z	?



W H _ _ _ _ _ _ _ _ _

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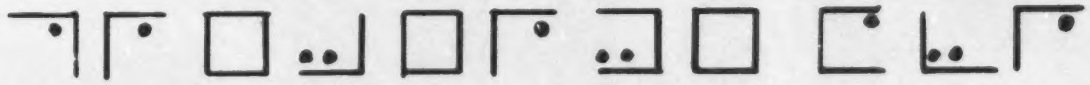

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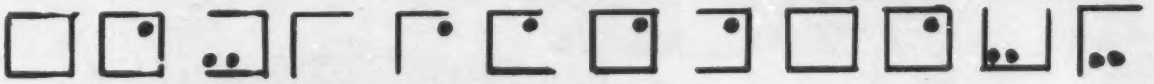

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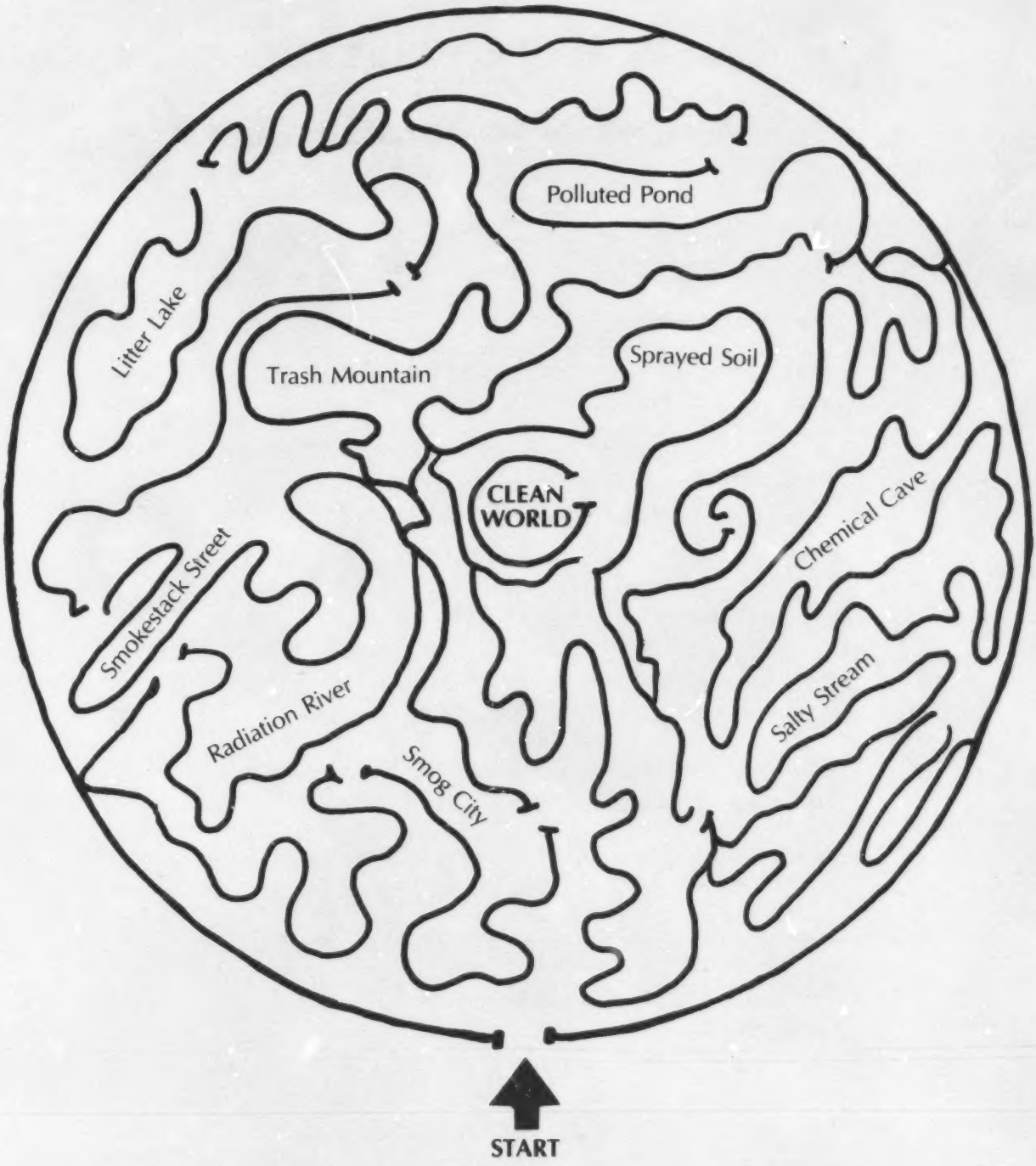
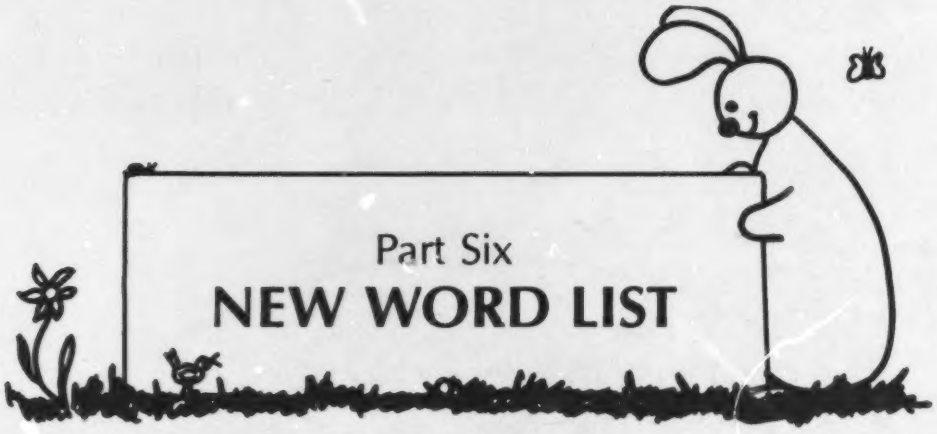
Can you find the way to a clean world?

Don't get trapped in the polluted places.





Part Six
NEW WORD LIST

Page 1. **introduction** — the beginning.

preserver — one who saves or keeps from harm.

Page 3. **polluting** — making dirty.

Page 4. **environment** — the surrounding in which a person, plant, or animal lives.

Page 5. **geranium** — a plant with large red, pink, or white flowers on it. The leaves have many rounded edges.

vinegar — a sour-tasting liquid used in cooking. It has a strong smell.

acid — something that is sour and makes a special blue paper (called litmus) turn red.

oil — a greasy liquid that will not mix with water.

Page 6. **oxygen** — a gas that has no color or smell. One fifth of air is oxygen.

carbon dioxide — a gas made of carbon and oxygen.

Page 7. **Kleenex** — soft, thin paper. People blow their noses in it.

magnifying — making things look larger.

Page 8. **gases** — things that are not solid or liquid. They move around easily and do not have a shape. Air is made of different gases.

Page 9. **lungs** — parts of the body inside the chest that take in oxygen from the air and let out carbon dioxide.

lung cancer — a sickness where parts of the lungs do not grow in the right way.

emphysema — a sickness of the lungs which keeps people from breathing well.

dizziness — a feeling of going around in circles.

coughing — to blow air out suddenly from the lungs; to clear the throat.

sore — hurting.

Page 11. **poisons** — things that can make you sick or can kill you.

smog — smoke and fog mixed together.

Page 13. **fuels** — anything that burns and makes heat or power.

power plants — places where energy is made.

electricity — energy that makes the lamp light when you plug it into the wall.

sulfur dioxide — a gas that makes it hard to breathe.

Page 14. **nuclear power** — energy that is given off when very small pieces of some things break apart or join together.

radiation (nuclear) — the way in which nuclear energy is given off.

Page 15. **sprays** — clouds of little drops.

Page 17. **environmental protection** — keeping your surroundings safe.

moderate — fair, all right.

unhealthful — not good for you.

hazardous — very bad for you.

Page 19. **exercise** — move around a lot.

Page 21. **vacuum cleaner** — a small machine used for cleaning.

Page 22. **thermostat** — something on the wall that helps to make a room or building warmer or cooler.

Page 23. **solar** — having to do with the sun.

tongue — something inside the mouth that can move. It helps people to talk and to eat.

Page 24. **marigold** — a small, brightly colored plant that has a strong smell.

swatter — something to hit flies with.

Page 26. **trace** — to draw by putting a thin piece of paper over something and following the lines with a pencil. Your drawing should look like the one underneath it.

cardinal — a bright red bird that eats lots of bugs.

Page 29. **chimney** — smoke from a fire goes up through this opening.

Page 30. **ocean beaches** — sandy places along the edge of the sea.

staple — to put things together with a small piece of metal.

Page 31. **chemicals** — something made by or used in chemistry.

Page 32. **factories** — buildings where things are made.

Page 33. **streams** — very small rivers.

Page 34. **sewer** — a pipe used to carry water and wastes.

sewage treatment plant — a place where dirty water is made cleaner.

Page 38 **showers** — baths where one is sprayed with fine streams of water.

Page 40. **plastic** — something that is not metal and is made by people. It is not found in nature.

Page 43. **refuse (ref' use)** — anything thrown away that seems to be useless.

magazine — stories and/or facts in a very thin book with a paper cover.

Page 44. **weigh** — to find out how heavy something is.

aluminum — a light, silver metal.

Page 45. **flour** — something soft and fine that is used to make bread, cake, and cookies.

Page 47. **materials** — what a thing is made of.

metal — something hard that shines, gets hot or cold, and can be melted. Gold is a metal.

Page 49. **melt** — to soften something so it can be poured.

liquid — something that flows easily; something that can be poured.

Page 52. **manure** — droppings from animals.

compost — something that is made when vegetable garbage is mixed with manure.

Page 55. **enforced** — to have made something happen.

representative — one of the leaders of our country who works in the United States House of Representatives.

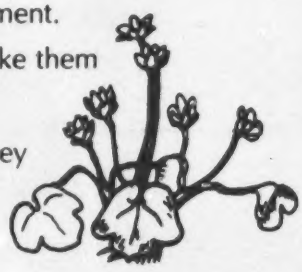
senator — one of the leaders of our country who works in the United States Senate.

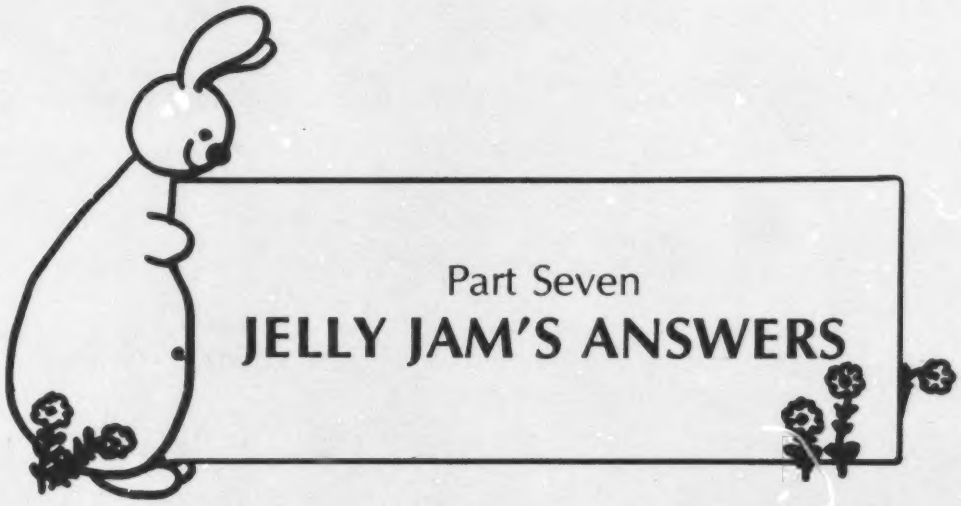
Page 56. **taxes** — money that one has to pay to the government.

medicine — something given to sick people to make them better.

Page 59. **ecology** — learning about living things and how they act with what is around them.

pollen — a fine yellow dust found in flowers.





Part Seven

JELLY JAM'S ANSWERS

Page 4. Circles should be drawn around the car, the factory, and the home.

Page 5. The leaf in plain water will look better. Its environment has not been polluted.

Page 6. 1. They would die.

2. The arrow should be pointing to the plant.

Page 7. You may see little pieces of dirt. They are like carbon.

They may have come from cars, factories, homes, trains, boats, or buses.

Page 10. The head, eyes, nose, mouth, throat, and chest (lungs) should have an X on them.

Page 12. 3, 4, 2, 1, because bikes do not make any air pollution. Buses and vans take lots of people, so fewer cars are being used. There is less pollution. Four people in one car means fewer cars on the road. The most polluting way of travel is one person in each car.

Page 13. You will see black on the bottom of the plate. (It is carbon.)

Page 14. Yes ✓. (Some gases are dangerous to breathe. The gas that comes out of the tailpipe of a car is very dangerous. Some other dangerous things that you cannot see are germs and large amounts of electricity.)

Page 20. 1. c

2. d

3. a

4. b

Page 21. The circles should be around: iron, TV, toaster, washing machine, lamp, electric stove, and vacuum cleaner.

Red Xs should be on: iron, TV, lamp, electric stove, and vacuum cleaner.

Page 22. black paper.

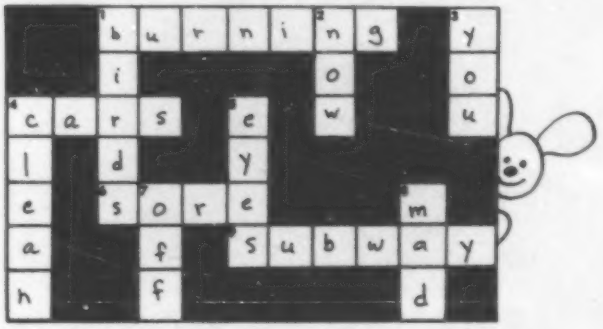
Dark things take in (absorb) heat.
Light things throw back (reflect) heat.

Page 24. fly - swatter; ants in honey - wet rag; spiderwebs in the house - broom; bugs that eat vegetables in the garden - marigold plants. (The smell of the plant keeps some bugs away.)

Page 26. cardinal.

Page 27. Can you use less electricity? Can you help the birds? Can you try to stop people from smoking in your house or from using their car too much? These are some of the things that you and your parents can do.

Page 28.



Page 29. (See the answers for Page 28.)

Page 30. To find out about clean water, call the department of health in your town or city.

Page 31. 1. Baby bugs, water snakes, water weeds, and baby fish should be in the picture.

2. A red X should go through cans, tires, bottles, and cans filled with chemicals.

Page 37.

Page 40. These words should be crossed out: plastic cups, cans, paper, broken pole, cardboard boxes, napkins, bottles, and plastic coolers.

Page 41. People could learn that litter, too much salt, too many chemicals, and poisons can hurt living things. People might also learn that children can really act to help the environment.

Page 42. 1. opened can. 2. fish. 3. polluted river. 4. clean water.

Page 44. 1. one hundred years. 2. plastic cup.

Page 45. pink or light red.

Page 47. 5 paper 1 metal 3 light plastic 2 hard wood 4 cardboard

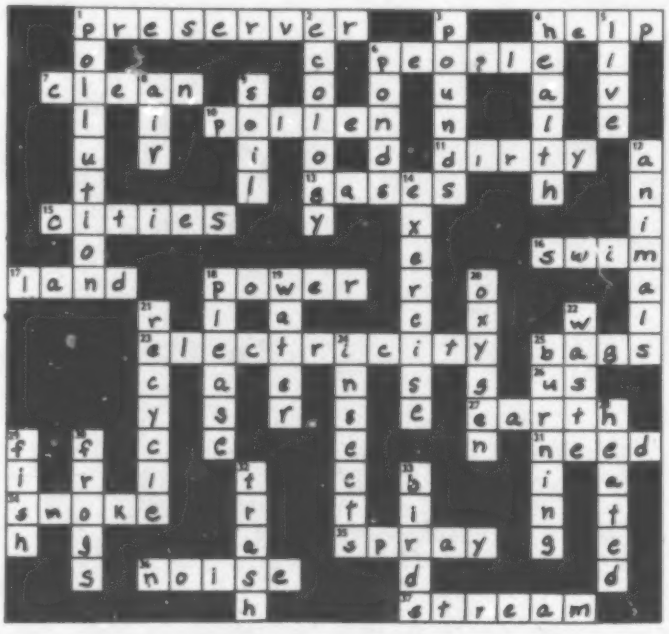
Page 49. heat ✓.

Page 51. Everything but stores should be circled.

Page 53. brown.

Page 58. (See the answers for Page 59.)

Page 59.

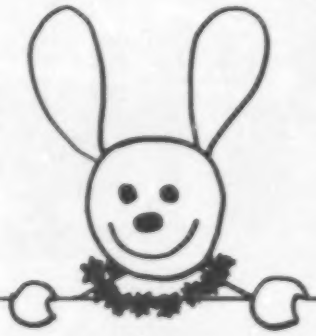


Page 60. What are you doing to help preserve our environment?

Page 61.

When you are finished with this book:

- Keep it at school.
- Keep it at home.
- Share it with a friend.
- Give it to your school library.
- Take it to a recycling center.



I hope you liked my book!

Student Order Forms for Jelly Jam pins, posters, and club membership.

(Cut along the dotted lines.)

CIRCLE THE POSTER OR POSTERS THAT YOU WANT

1

2

3

4

5

6

7

8

Dear Mr. Rodgers:

I would like some Jelly Jam pins and posters.

Please send me:

_____ pins at $1.00 each. Total price for pins $ _____
_____ posters at $3.00 each. Total price for posters $ _____
I added $ .50 for postage. $ .50
If I live in Florida, I added 5% for sales tax. $ _____

THE TOTAL AMOUNT OF MY ORDER IS: $ _____

My name _____

My street _____

My city and state _____

My zip code number _____

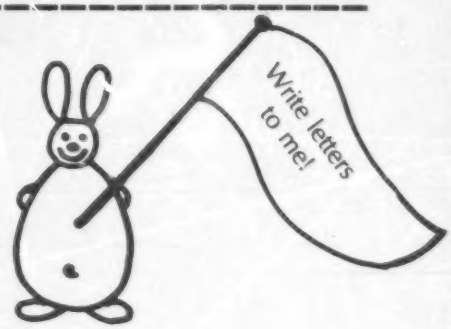
I have put my money in an envelope, and I have wrapped any loose coins in paper so they won't move around.

I will mail the envelope to: Jelly Jam's Store
P. O. Box 12834
St. Petersburg, Florida 33733-2834

Pin

(Cut along the dotted lines.) (Cut along the dotted lines.)

Membership Order Form



Dear Jelly Jam:

I would like to become a member of your Jelly Jam, The People Preserver Club. I understand that I will get a newsletter, answers to environmental questions, and several surprises each year.

Here is $10.00 for my membership for one year.

My name _____

My street _____

My city and state _____

My zip code number _____

I have put my money in an envelope and will mail it to:

Jelly Jam
101 Lawton Road
Canton, CT 06019

Note to Teachers and Parents

The *Jelly Jam, the People Preserver* activity book is accompanied by a guide for teachers and parents. This *Teaching Guide* is filled with related information, classroom and home activities, ideas, games, titles, questions and answers, experiments, photographs, and inter-disciplinary projects.

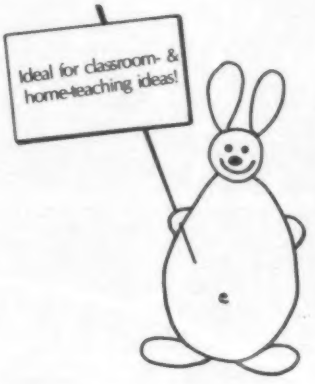
Essential pages from the children's activity book are reproduced in the *Teaching Guide* to make it easier for you to use. The *Jelly Jam Teaching Guide* is not only an effective teaching tool, but it is also pleasant, interesting, and easy to read.

The Jelly Jam books have been commended by the National Wildlife Federation, which said that "Children will find *Jelly Jam, the People Preserver* enjoyable and understandable."

(Cut along the dotted lines.)

Jelly Jam Teaching Guide
Request for Information

Mr. Ed Rodgers
Our Natural World
P.O. Box 12834
St. Petersburg, Florida 33733-2834



Dear Mr. Rodgers:

Please send me information about the *Jelly Jam Teaching Guide* as soon as it is available. I am interested in learning more about Jelly Jam and our environmental concerns.

My name _____

My school (optional) _____

My address _____

_____

Thank you!

ACKNOWLEDGEMENTS

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Special thanks also go to the hundreds of children who have understood and loved this book.

Jelly Jam sends hugs to all these people.

Judi Friedman

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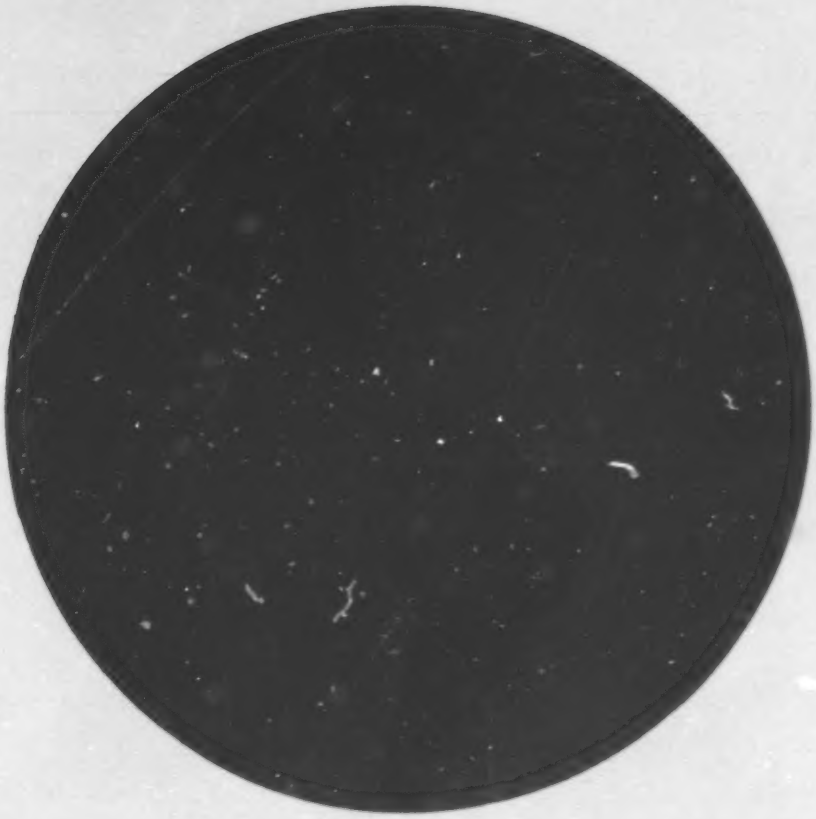

REMEMBER
IT'S YOUR EARTH
and
THERE IS ONLY ONE